

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 14-30 and 32-36 are pending. None of the specification, claims or drawings are amended by way of the present response.

The Office Action rejected Claims 14, 16, 17, 24-30, 32-34 and 36 under 35 U.S.C. § 102(b) as anticipated by Yamada (U.S. Patent No. 5,628,700). In addition, the Office Action objected to Claims 15, 18-23, and 35 as being dependent upon a rejected base claim, but further indicated these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The indication of allowable subject matter is acknowledged with gratitude. For the reasons discussed below, all the claims are believed to be in condition for allowance.

Claim 14 recites a belt type continuous variable transmission that includes a pulley shaft that is supported by a first bearing and a second bearing that are spaced apart from each other in an axial direction of the pulley shaft, and a supply oil passage that supplies hydraulic fluid to a pulley hydraulic chamber. The supply oil passage includes a radial direction oil passage that extends in the pulley shaft in a radial direction of the pulley shaft.

The radial direction oil passage is formed in the pulley shaft outside of a portion of the pulley shaft that is between a center of the first bearing and a center of the second bearing with respect to the axial direction of the pulley shaft. The portion of the pulley shaft that is between the center of the first bearing and the center of the second bearing with respect to the axial direction from the pulley shaft is free of any oil passages that extend in the radial

direction of the pulley shaft such that any radial direction oil passage that extends in the radial direction of the pulley shaft is not provided between the center of the first bearing with respect to the axial direction of the pulley shaft and the center of the second bearing with respect to the axial direction of the pulley shaft.

Turning to the applied reference, Yamada fails to disclose a pulley shaft that includes a portion that is between a center of a first bearing that supports the pulley shaft and a center of a second bearing that supports the pulley shaft with respect to an axial direction of the pulley shaft that is free of any oil passages that extend in the radial direction of the pulley shaft.

Figure 1 of Yamada illustrates a continuously variable transmission that includes a drive shaft 24 and a follower shaft 62. Figure 2 of Yamada illustrates the drive shaft 24 in detail. As can be seen in Figure 2 of Yamada, the drive shaft 24 includes a first oil hole $24h_1$ and a second oil hole $24h_2$ that each extend in the radial direction of the draft shaft 24.¹ Figure 2 of Yamada further illustrates a ball bearing 114 that supports the drive shaft 24.²

In rejecting Claim 14, the Office Action identifies both the drive shaft 24 and the rotation shaft 23 of Yamada as the claimed pulley shaft. However, as discussed at column 4, lines 16-34 of Yamada, the rotation shaft 23 is a shaft that is connected to an outward side of the fluid coupling 22 and to a forward/reverse changeover device 25. In other words, the rotation shaft 23 is an output shaft of the fluid coupling 22 that is connected to a planetary gear train 27, a forward clutch 40, and a reverse brake 45. As can be seen in Figure 1 of Yamada, the changeover device 25 separates the rotation shaft 23 from the drive shaft 24.

¹ See Yamada at column 5, lines 32-45.

² See Yamada at column 6, lines 41-49.

Therefore, a person of ordinary skill in the art would not have interpreted the rotation shaft 23 of Yamada as a pulley shaft.

With respect to the drive shaft 24, it is readily apparent from Figure 2 of Yamada that both the first oil hole $24h_1$ and the second oil hole $24h_2$ are positioned between a center of the ball bearing 114 that supports the drive shaft 24 and a center of any other bearing that would also serve to support the drive shaft 24. This configuration is the exact opposite of the claimed configuration in which a portion of the pulley shaft that is between the center of the first bearing and the center of the second bearing with respect to the axial direction of the pulley shaft is free of any oil passages that extend in the radial direction of the pulley shaft.

Thus, neither the drive shaft 24 nor the rotation shaft 23 disclose a pulley shaft including all the features recited in Claim 1.

Figures 5-8 of Yamada further illustrate a second embodiment that includes a drive shaft 224 and a follower shaft 201. With respect to the follower shaft 201, Yamada states that “[t]he follower pulley 209 is arranged to a follower shaft 201 having one end rotatably supported to a side cover 205 (see FIG. 6) through a bearing 204 and the other end rotatably supported thereto through a bearing 260.”³ Thus, Yamada describes that the follower shaft is supported by only two bearings: the bearing 204 and the bearing 260. The follower shaft is illustrated in greater detail in Figure 6 of Yamada. As can be seen in Figure 6, the follower shaft 201 includes an oil hole 212 that extends in a radial direction of the follower shaft 201.

³ See Yamada at column 8, lines 55-58.

As is readily apparent from Figure 6 of Yamada and the above-quoted passage from Yamada, this oil hole 212 is between the bearing 204 and the bearing 260.⁴

It is noted that although Figure 5 of Yamada appears to illustrate a third bearing to the right of the drive gear 218, the more detailed view in Figure 6 and the explicit description of the procedure for assembling the follower pulley 209 make clear that there is no such third bearing that supports the following shaft 201. Instead, Yamada states (emphasis added) “[t]he follower shaft 201 is disposed so that the outer race 204a of the bearing 204 abuts on the inner wall of the side cover 205, completing assembling of the follower pulley 209.”⁵ As the bearing 204 completes assembly of the pulley 209, it is clear that there are no further bearings on the follower shaft 201.

Thus, each of the pulley shafts disclosed in Yamada include radial direction oil passages that extend in the radial direction of the pulley shaft that are provided between the center of the bearings that support the pulley shaft with respect to the axial direction of the pulley shaft, which is the opposite of the claimed configuration.

Accordingly, Yamada fails to disclose all of the features recited in Claim 14. It is submitted Claim 14 and the claims dependent therefrom are in condition for allowance.

For the reason discussed above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for allowance. Therefore, a Notice of Allowance for Claims 14-30 and 32-36 is earnestly solicited.

⁴ See Yamada at column 8, line 55 to column 9, line 3.

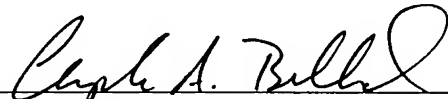
⁵ See Yamada at column 10, lines 61-64.

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the Supplemental Office Action dated June 11, 2009

Should the Examiner deem that any further action is necessary to place this application in event better condition for allowance, the Examiner is encouraged to contact Applicants' representative at the below-listed telephone number.

Respectfully submitted,

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